

**EFEK LAMA PENGERINGAN TERHADAP KOMPOSISI KIMIA,
KECERNAAN *IN VITRO* PRODUKSI GAS, DAN KANDUNGAN
ANTI KUALITAS DAUN KETELA POHON
(*Manihot esculenta* Crantz)**

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INTISARI

Penelitian ini bertujuan untuk mengetahui efek lama pengeringan terhadap komposisi kimia, pencernaan *in vitro*, anti kualitas daun ketela pohon. Ketela pohon varietas Bayam umur pemotongan 7 bulan diambil dari dusun Gombang, Ponjong, Gunungkidul pada bulan Juli 2003. Sampel diambil secara acak dari 16 plot dengan ukuran 7,5 x 7,5 m² tiap plot dibagi menjadi 4 lama pengeringan (0, 2, 4, dan 6 hari). Pengeringan dilakukan di laboratorium Makanan Ternak Fakultas Peternakan, UGM menggunakan para-para. Setelah daun ketela pohon dikeringkan dibagi menjadi 2 bagian untuk dikeringkan di oven 55°C dan *freeze dry* (-40°C) begitu juga dengan sampel segar untuk diamati komposisi kimia dan produksi gas. Variabel yang diamati yaitu kandungan BK, BO, PK, LK, tannin dan HCN, dan produksi gas dengan ditambah dan tidak ditambah *Polyethylene glycol* (PEG). Data dianalisis menggunakan analisis variansi menurut rancangan acak lengkap pola searah untuk komposisi kimia dan antikualitas, serta pola faktorial untuk produksi gas. Perbandingan antara oven dan FD dianalisis dengan t-test. Hasil penelitian menunjukkan terdapat perbedaan yang nyata ($P < 0,05$) pada kadar BK, EE, tannin, HCN, serta produksi gas sedangkan kadar BO dan PK berbeda tidak nyata. Produksi gas dari sampel yang ditambah PEG lebih tinggi pada oven. Efek pengeringan dengan oven dan FD menunjukkan perbedaan nyata ($P < 0,05$) pada BK dan fraksi c. Hasil penelitian dapat disimpulkan bahwa lama pengeringan dapat menurunkan LK, pencernaan di dalam rumen, tannin dan HCN, tetapi menaikkan kadar BK. Lama waktu pengeringan 4 hari merupakan waktu yang efektif untuk dilakukan pengeringan.

Kata Kunci : Ketela Pohon, Pengeringan, Oven, *Freeze Dry*, Kecernaan *In Vitro*, Antikualitas

**THE EFFECT OF DRYING LENGTH ON CHEMICAL COMPOSITION,
DIGESTIBILITY OF *IN VITRO* GAS PRODUCTION, AND ANTI
NUTRITION CONTENTS OF CASSAVA LEAVES
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ABSTRACT

This experiment was conducted to know the effect of drying on chemical composition, *in vitro* digestibility, anti nutrition content on Cassava leaves. Cassava leaves of Bayam variety of 7 months old was harvested from Gombang village, Ponjong subdistrict, Gunungkidul regency on July 2003. Cassava leaves from 16 plots of 7,5 x 7,5 m² were allocated for 4 treatments of drying length (0, 2, 4, and 6 days) with 4 replications. The drying was affected at laboratory Animal Nutrition, Faculty of Animal Science, Gadjah Mada University using rack drying hay. Dried cassava leaves were divided into 2 parts, one part was prepared by using oven 55°C and one other part was prepared by using *freeze drying* (-40°C) for measuring chemical composition and gas production. The variables measured were dry matter (DM), organic matter (OM), crude protein (CP), extract ether (EE), tannin, and HCN content, and gas production was added with or without *Polyethylene glycol* (PEG) addition. One-way anova was chosen to analyze the effect of drying length on chemical composition and anti nutritional factor, and factorial analyzed for gas production. To compare between oven and *freeze drying* method t-test was used in this study. The result showed that significant difference (P<0,05) was detected on DM, EE, tannin, HCN, and gas production, but not significantly difference on OM and CP. The gas production of sample with addition of PEG was higher effect compared to sample without PEG. There was difference between oven and FD on DM and fraction c. It can be that drying length decreased EE, digestibility, tannin, HCN, but increased DM content. Drying length 4 days were the most effective time for drying.

Key Words : Cassava Leaves, Drying, Oven, *Freeze Drying*, *In Vitro* Digestibility, Anti Nutrition